OIPE
FEB 13 2004
PATENT & TRADEMARK OFFICE
JC64

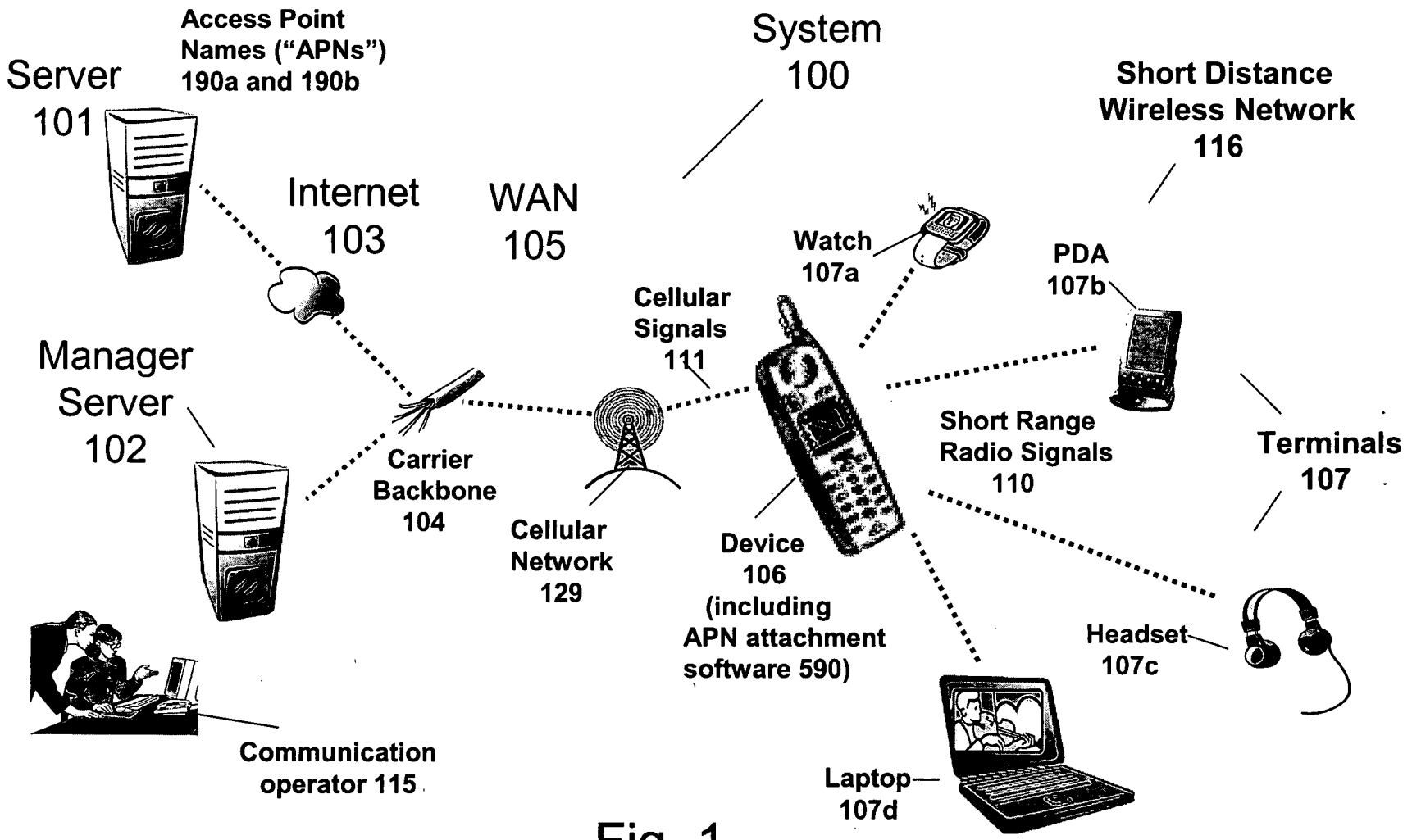

Fig. 1

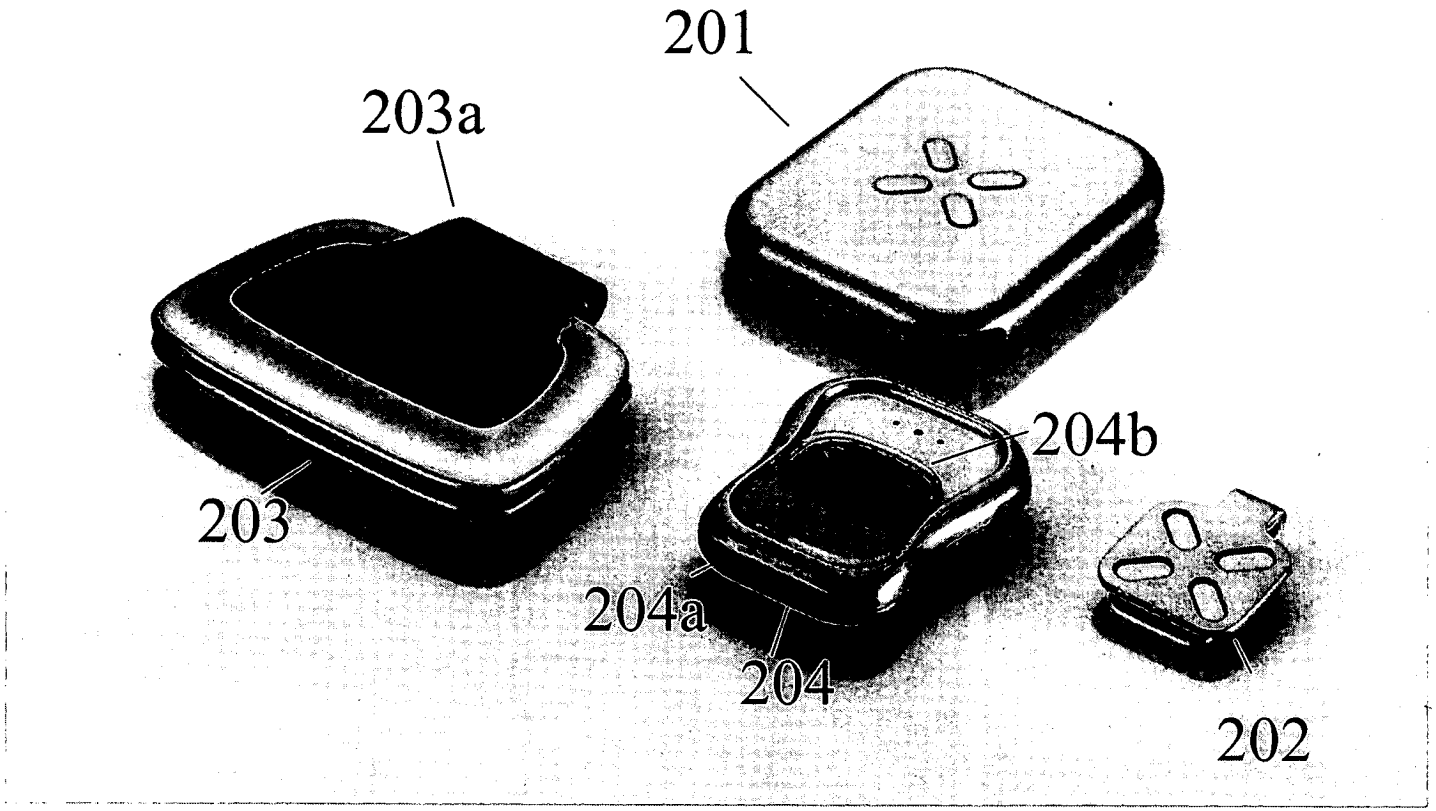

Fig. 2

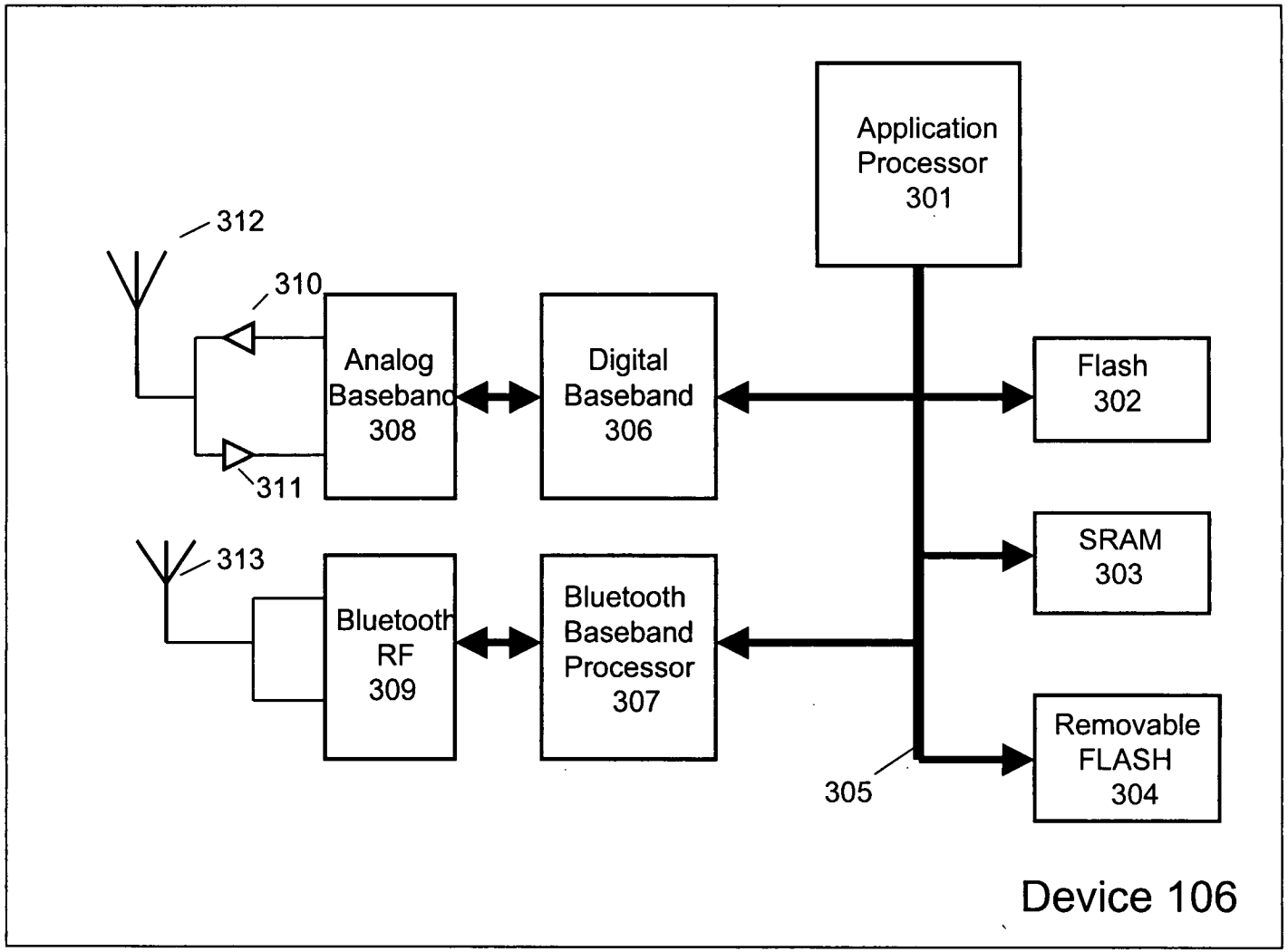
Application Processor 301
312
310
Analog Baseband 308
Digital Baseband 306
Flash 302
311
313
SRAM 303
Bluetooth RF 309
Bluetooth Baseband Processor 307
Removable FLASH 304
305
Device 106

Fig. 3a

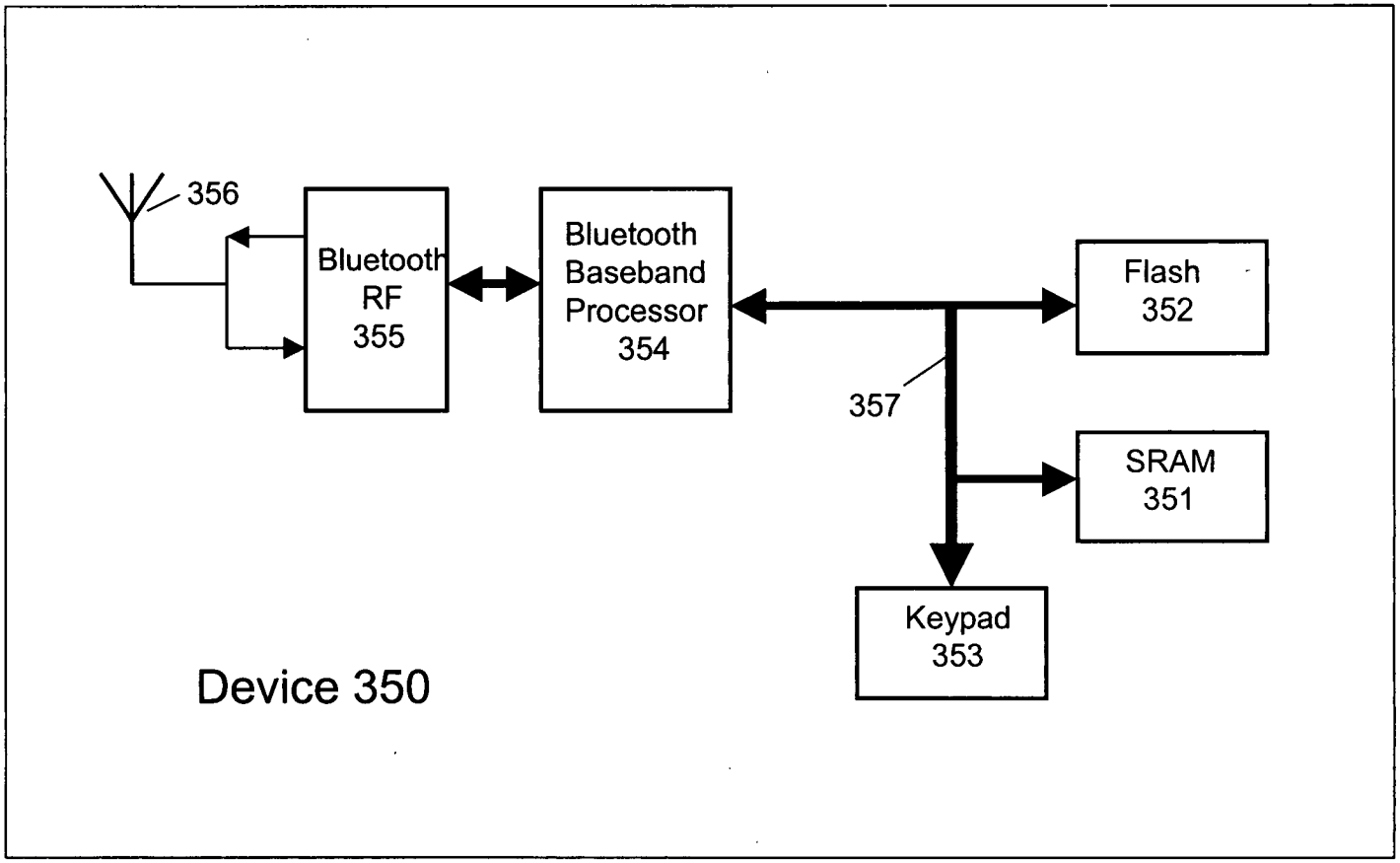
356
Bluetooth
RF
355
Bluetooth
Baseband
Processor
354
Flash
352
357
SRAM
351
Keypad
353
Device 350

Fig. 3b

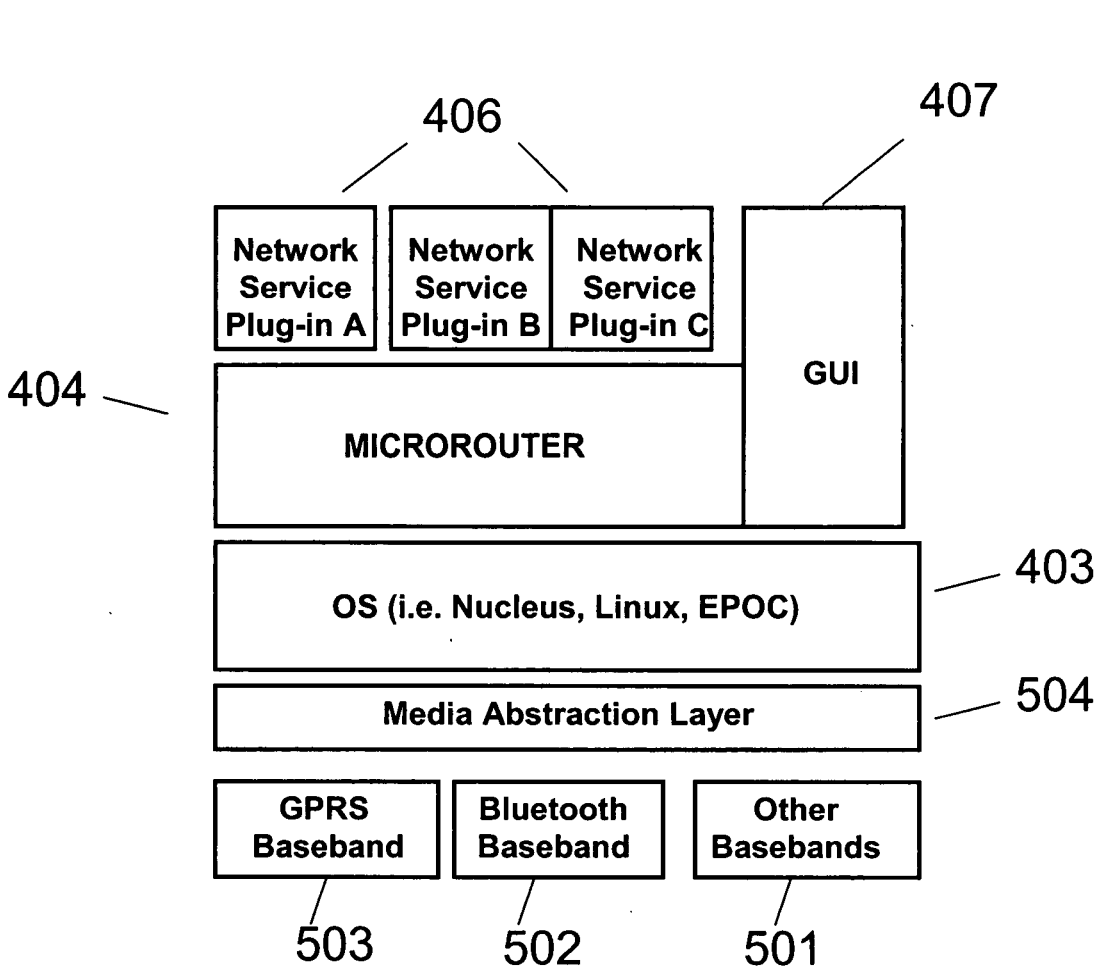
500
406
407
Network Service Plug-in A
Network Service Plug-in B
Network Service Plug-in C
GUI
404
MICROROUTER
OS (i.e. Nucleus, Linux, EPOC)
403
Media Abstraction Layer
504
GPRS Baseband
Bluetooth Baseband
Other Basebands
503
502
501

Fig. 4

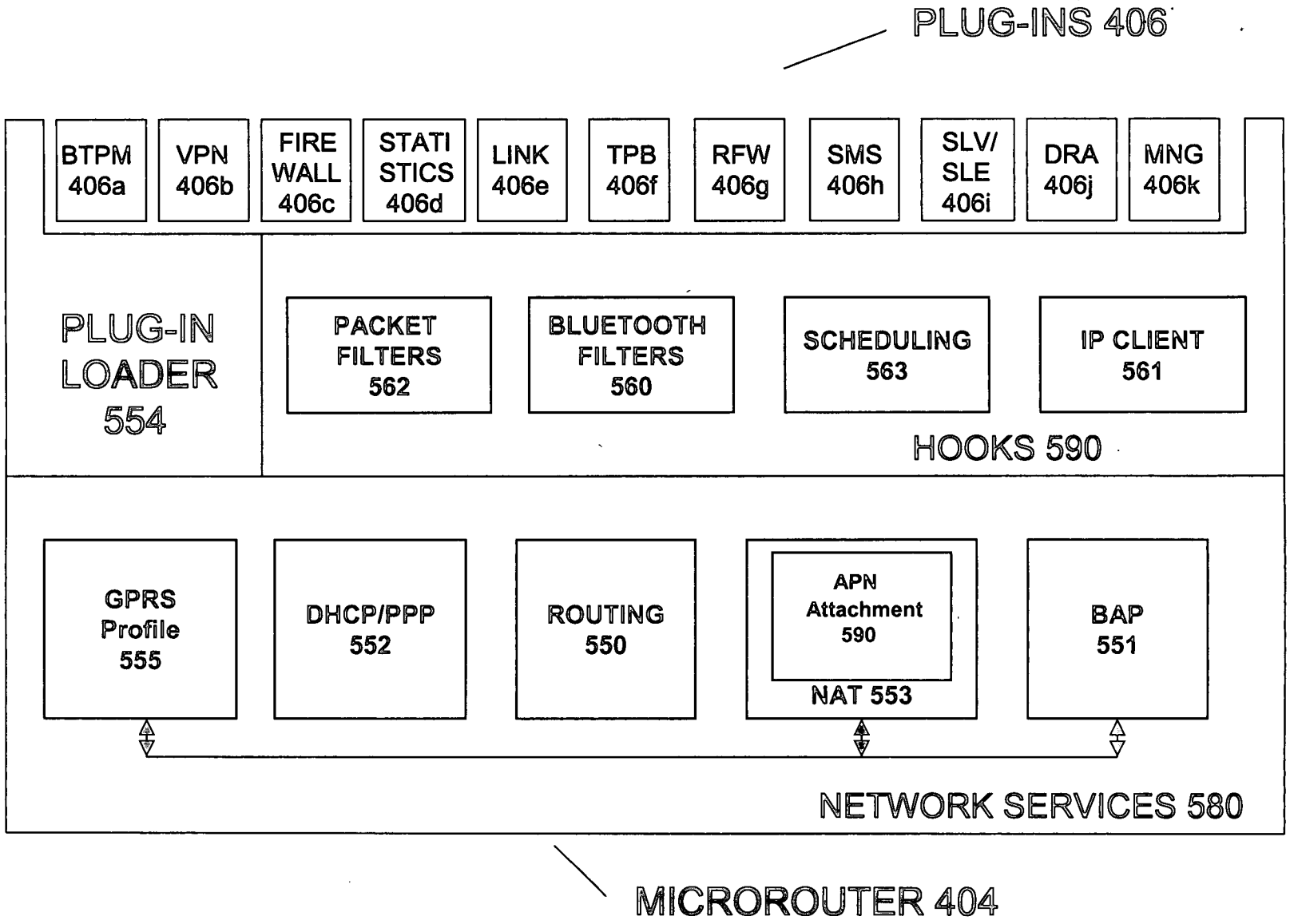
PLUG-INS 406
BTPM 406a
VPN 406b
FIRE WALL 406c
STATI STICS 406d
LINK 406e
TPB 406f
RFW 406g
SMS 406h
SLV/ SLE 406i
DRA 406j
MNG 406k
PLUG-IN LOADER 554
PACKET FILTERS 562
BLUETOOTH FILTERS 560
SCHEDULING 563
IP CLIENT 561
HOOKS 590
GPRS Profile 555
DHCP/PPP 552
ROUTING 550
APN Attachment 590
NAT 553
BAP 551
NETWORK SERVICES 580
MICROROUTER 404

Fig. 5a

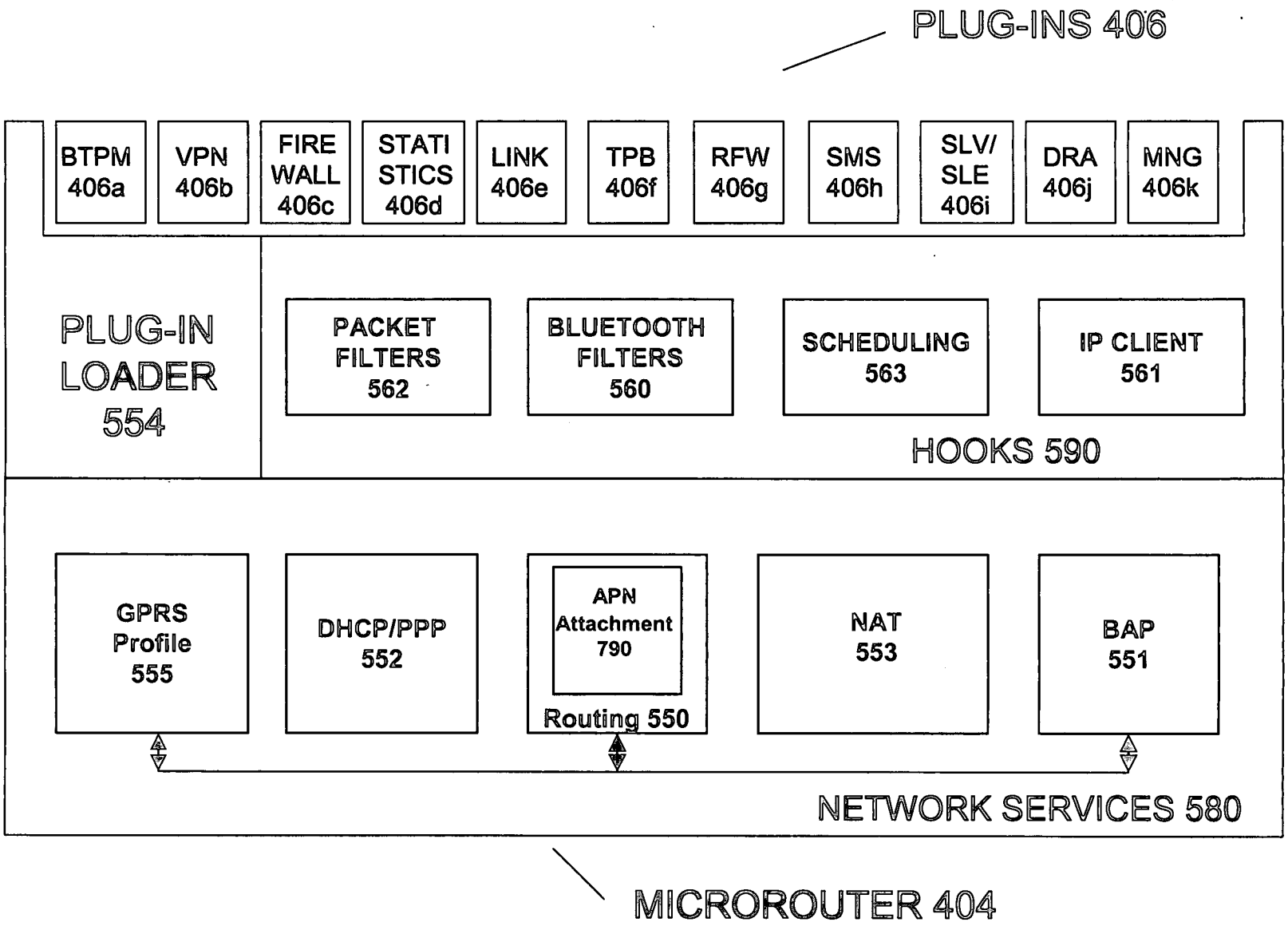
PLUG-INS 406
BTPM 406a
VPN 406b
FIRE WALL 406c
STATI STICS 406d
LINK 406e
TPB 406f
RFW 406g
SMS 406h
SLV/ SLE 406i
DRA 406j
MNG 406k
PLUG-IN LOADER 554
PACKET FILTERS 562
BLUETOOTH FILTERS 560
SCHEDULING 563
IP CLIENT 561
HOOKS 590
GPRS Profile 555
DHCP/PPP 552
APN Attachment 790
Routing 550
NAT 553
BAP 551
NETWORK SERVICES 580
MICROROUTER 404

Fig. 5b

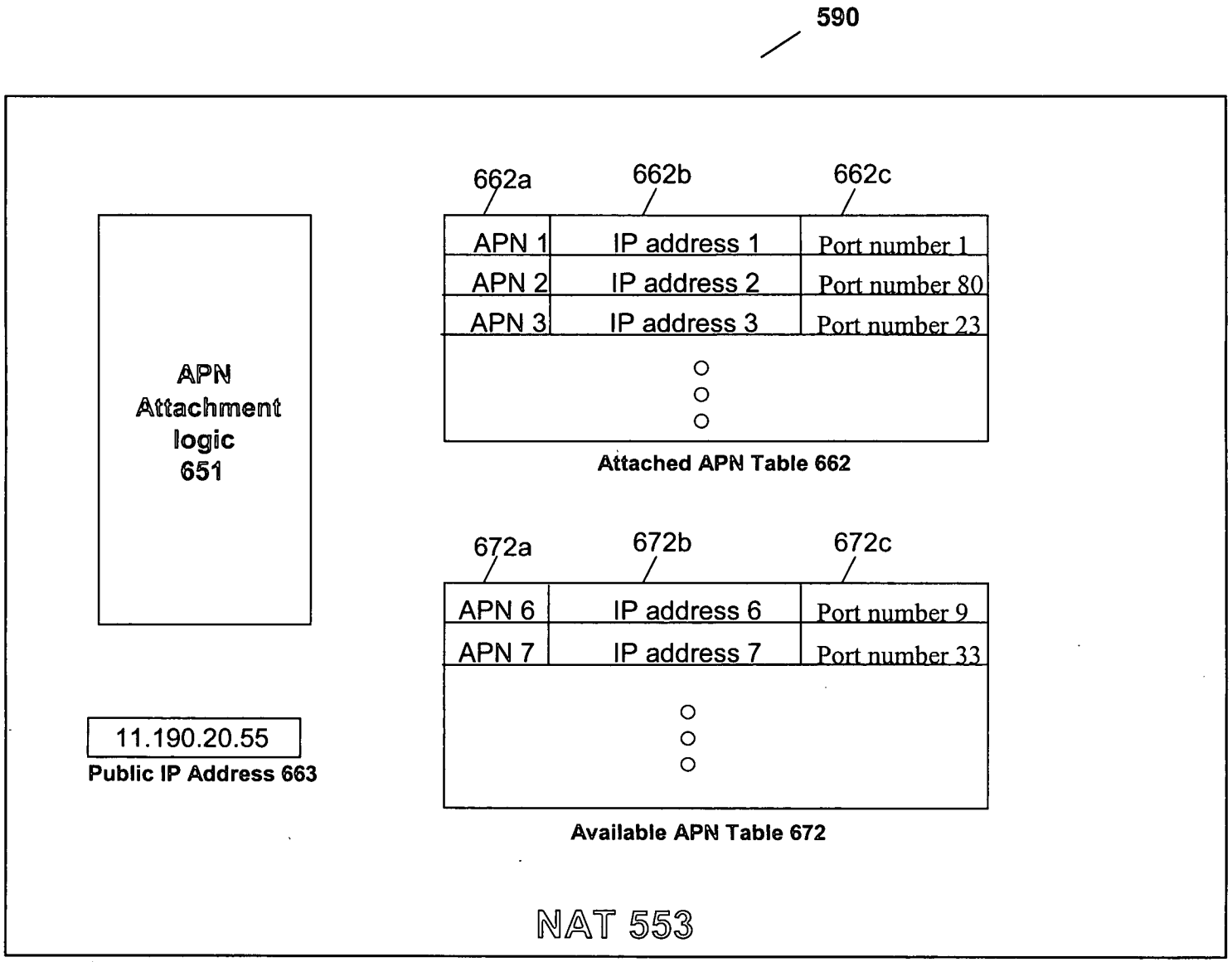
590
APN Attachment logic 651
662a
662b
662c
APN 1
IP address 1
Port number 1
APN 2
IP address 2
Port number 80
APN 3
IP address 3
Port number 23
Attached APN Table 662
672a
672b
672c
APN 6
IP address 6
Port number 9
APN 7
IP address 7
Port number 33
Available APN Table 672
11.190.20.55
Public IP Address 663
NAT 553

Fig. 6

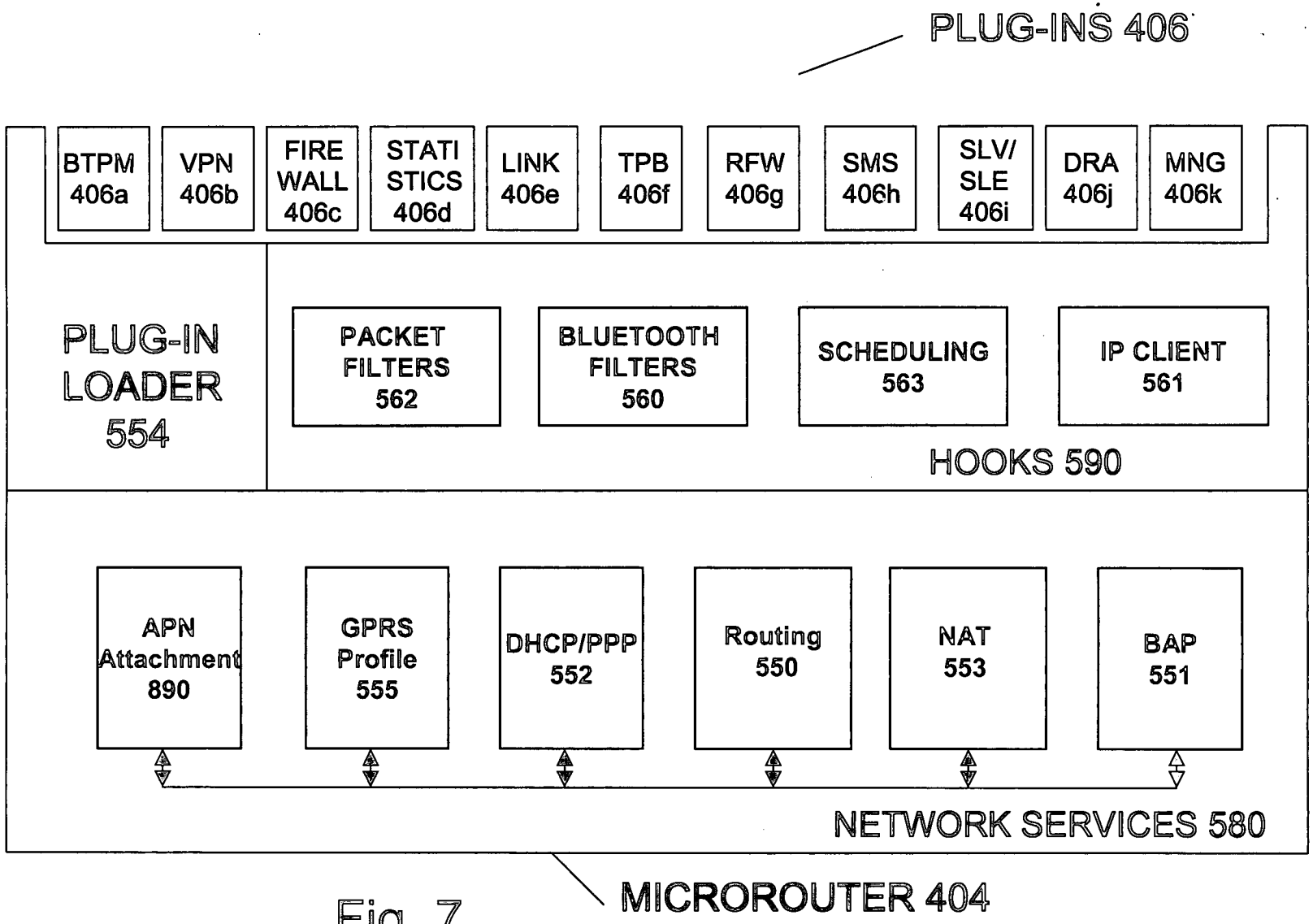
PLUG-INS 406
BTPM 406a
VPN 406b
FIRE WALL 406c
STATI STICS 406d
LINK 406e
TPB 406f
RFW 406g
SMS 406h
SLV/ SLE 406i
DRA 406j
MNG 406k
PLUG-IN LOADER 554
PACKET FILTERS 562
BLUETOOTH FILTERS 560
SCHEDULING 563
IP CLIENT 561
HOOKS 590
APN Attachment 890
GPRS Profile 555
DHCP/PPP 552
Routing 550
NAT 553
BAP 551
NETWORK SERVICES 580
MICROROUTER 404

Fig. 7

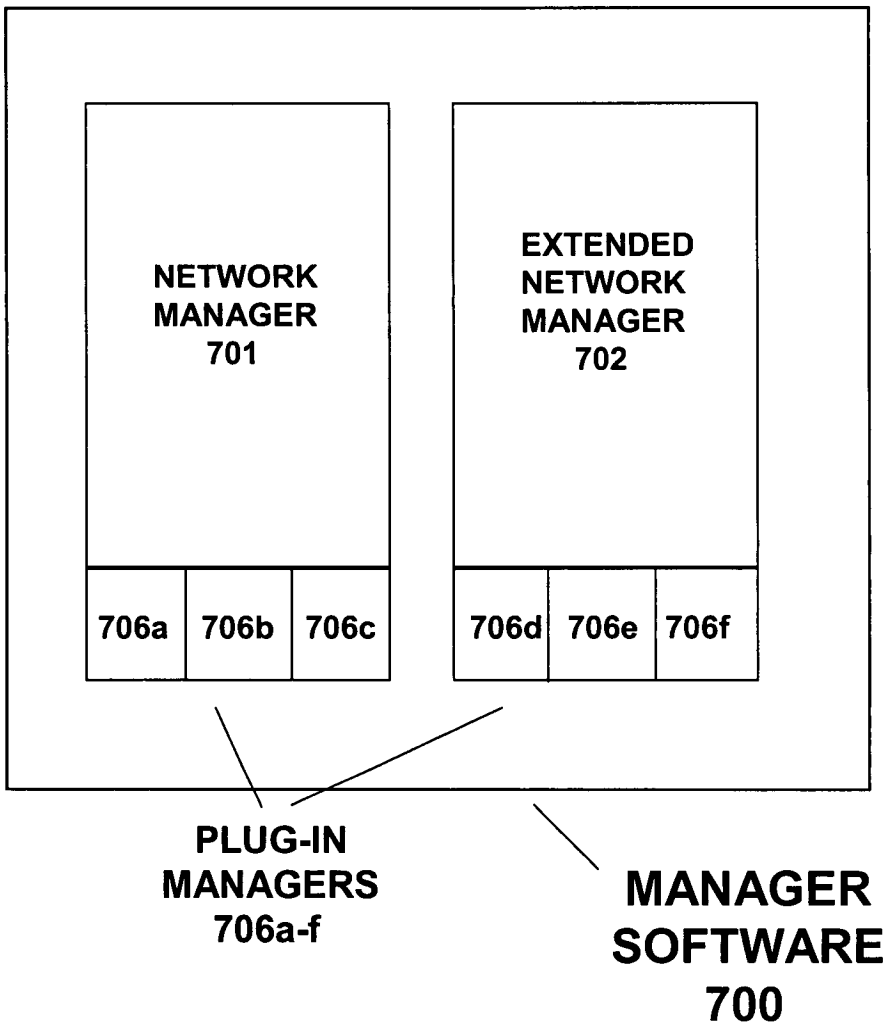
NETWORK MANAGER 701
EXTENDED NETWORK MANAGER 702
706a
706b
706c
706d
706e
706f
PLUG-IN MANAGERS 706a-f
MANAGER SOFTWARE 700

Fig. 8

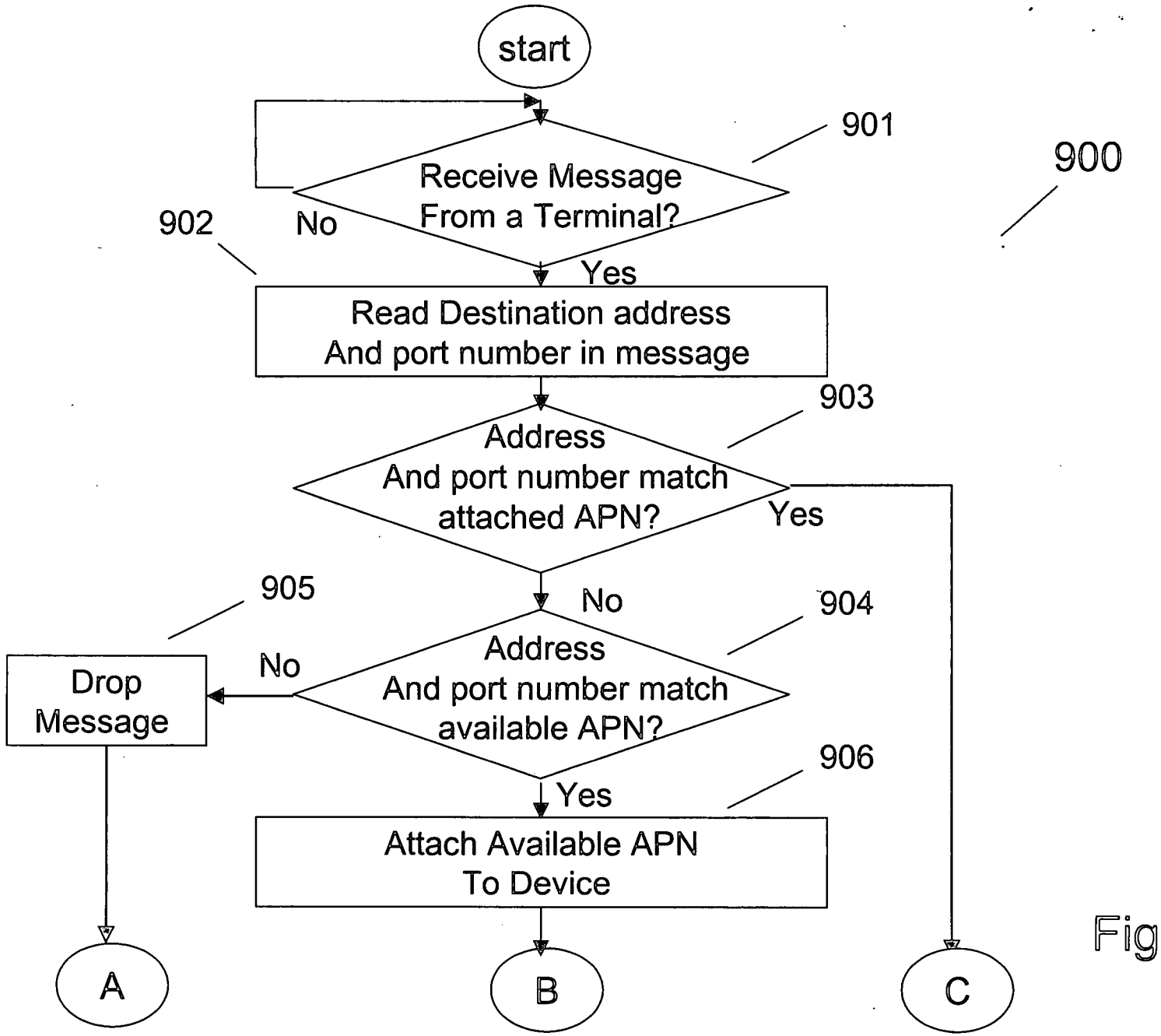
start
Receive Message From a Terminal?
901
900
902
No
Yes
Read Destination address And port number in message
903
Address And port number match attached APN?
Yes
905
No
904
Address And port number match available APN?
No
Drop Message
906
Yes
Attach Available APN To Device
A
B
C

Fig. 9a

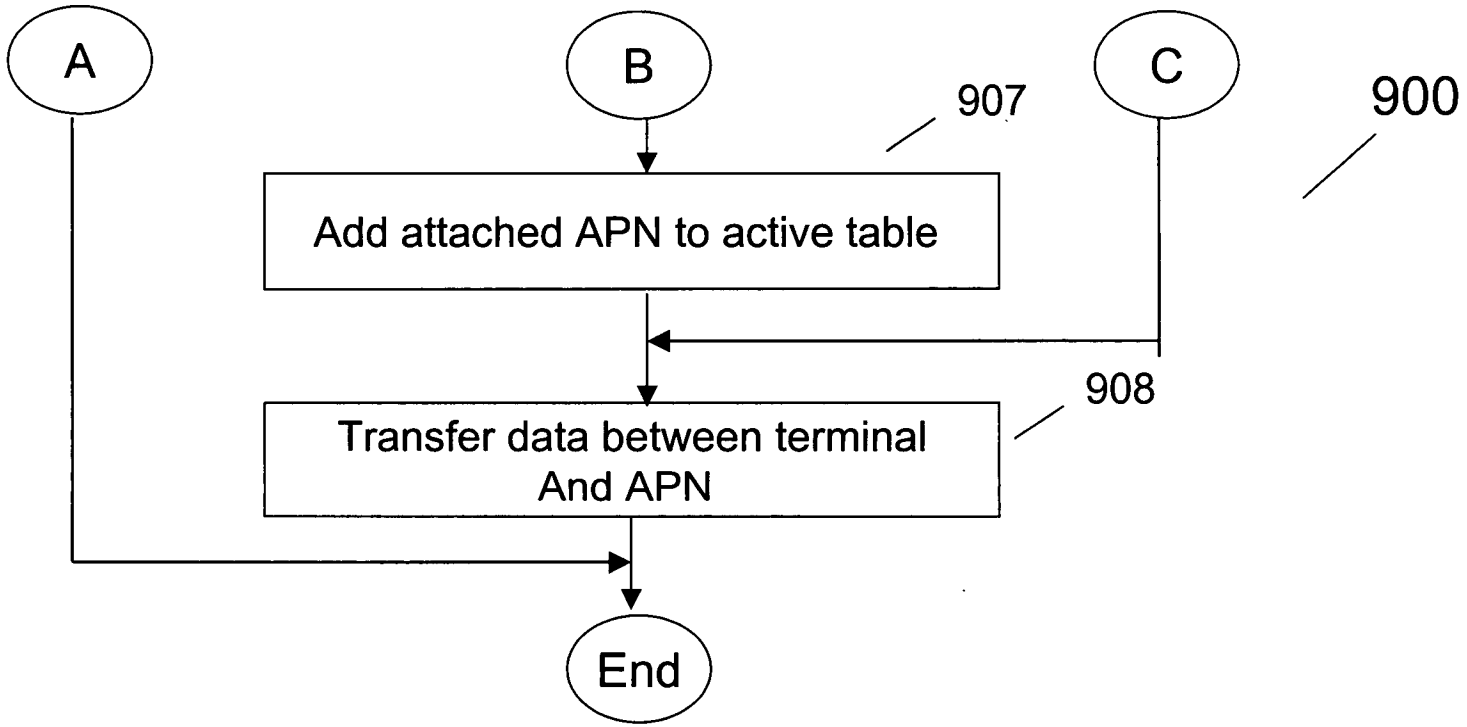
A
B
C
900
907
Add attached APN to active table
908
Transfer data between terminal
And APN
End

Fig. 9b